




# Dell PowerVault MD Storage Arrays—Information Update

 **NOTE:** Information in this document applies to Dell PowerVault MD3200, PowerVault MD3220, PowerVault MD3200i, PowerVault MD3220i, PowerVault MD3600i, PowerVault MD3620i, PowerVault MD3600f, and PowerVault MD3620f systems.

This document provides additional information that is not included in the PowerVault MD customer documentation. Issues described in this document may affect the installation, configuration, or operation of your PowerVault MD storage array. Information provided in the document must be reviewed before using your new storage array or upgrading your array software, firmware, or host operating system.

The PowerVault MD series documentation set at [support.dell.com/manuals](http://support.dell.com/manuals) provides information to setup, configure, and use your system.

## New Version of MD Storage Arrays Resource Media and Latest RAID Controller Firmware

The *Dell PowerVault MD Series Resource Media* provides a single installation for all PowerVault MD storage arrays. Platform-specific media is no longer distributed for each PowerVault MD storage array. Use the consolidated *Dell PowerVault MD Series Resource Media* (version 3.0.0.18 or later) to install the PowerVault MD Storage Manager and any media-based PowerVault MD storage array management application. All RAID controllers in your system must use the latest controller firmware versions as shown in the *Support Matrix* at [support.dell.com/manuals](http://support.dell.com/manuals).

For information on updating your RAID controller firmware, see the system-specific *Owner's Manual* at [support.dell.com/manuals](http://support.dell.com/manuals).

## Migrating a Disk Group

PowerVault MD Storage Manger (MDSM) allows you to migrate a disk group by exporting the disk group and then importing it to another storage array. You can also export a disk group to store data offline.

When you export a disk group, all the physical disks become offline. To ensure that the export is successful, at least two physical disks that are not part of the disk group you are migrating must be present in the storage array.

When you migrate the exported disk group to the new storage array, the import fails if a majority of the physical disks are not present in the group. For example, both the physical disks in a two-disk RAID 1 configuration, or the three physical disks (one from each disk pair) in a four-disk RAID 10 configuration must be present.

## RAID Controller Clock Synchronization Using NTP and SNTP

Your PowerVault MD series RAID controller firmware independently monitors Network Time Protocol (NTP) or Simple Network Time Protocol (SNTP) server messages and updates its time-of-day clock. After the RAID controller receives a broadcasted NTP or SNTP server message and the controller clock is adjusted, the controller firmware enforces an eight-hour delay. During the eight-hour time frame, no subsequent NTP or SNTP messages are monitored. The eight-hour delay prevents a rogue or malfunctioning NTP or SNTP server from causing excessive clock management activity on the RAID controller, leading to interference with normal controller processing.



**NOTE:** Configure the SNTP server to deliver broadcast messages to the 255.255.255.255 IP address.

## Maximum Physical Disk Support Limitations




**CAUTION:** If you are using a RAID 0 or RAID 10 configuration, do not attempt to create virtual disk groups exceeding the 120-physical disk limit.


Although the PowerVault MD storage arrays that come with premium feature activation can support up to 192 physical disks, RAID 0 and RAID 10 configurations with more than 120 physical disks are not supported. MDSM does

not enforce 120-physical disk limit when setting up a RAID 0 or RAID 10 configuration. Exceeding the 120-physical disk limit may cause your storage array to be unstable.

## Installing VDS Interface Version 3.0 on Microsoft Windows Server 2008 R2 Hosts

Installing MDSM from the *Dell PowerVault MD Series Resource Media* automatically installs the Microsoft Virtual Disk Service (VDS) provider supporting VDS interface version 1.1. You can choose to install VDS interface version 3.0 on host servers running Windows Server 2008 R2 or Windows Server 2008 R2 SP1. To install VDS interface version 3.0, see the VDS/VSS provider readme file on the resource media.

 **NOTE:** When you install VDS interface version 3.0 you cannot create and map LUNs to the host server using the Windows Share and Storage Management (SSM). To create and map a LUN with VDS interface version 3.0 installed, use DiskRAID utility commands instead of Windows SSM.

 **NOTE:** VDS interface version 3.0 is supported only on host servers running Windows Server 2008 R2 or Windows Server 2008 R2 SP1. All other operating systems must use VDS interface version 1.1, which is installed by default during MDSM installation.

## Discovering iSCSI Storage Arrays and Working With Automatically Created Hosts

The following considerations apply to PowerVault MD storage arrays in a Microsoft clustering environment, using Windows Server 2008 R2 and Windows Server 2008 R2 SP1.

### Using PowerVault MDCU to Discover iSCSI Storage Arrays

When using the PowerVault MD Configuration Utility (MDCU) to discover PowerVault MD series iSCSI storage arrays using an in-band connection, a communications error may occur. To resolve this issue, use the **Discover via Management Port** option in the MDCU wizard.

## Working With Automatically Created Hosts

When a PowerVault MD storage array is set up for the first time, a new host object may be created automatically and assigned to the default host group. In some cases, the new automatically created host cannot be moved to another host group or mapped to an existing LUN.

To resolve this issue:

- 1 Remove the automatically created host.
- 2 Recreate the host manually.

For information about deleting and creating hosts in MDSM, see your system-specific *Owner's Manual* at [support.dell.com/manuals](http://support.dell.com/manuals).

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